FOLIO REV: AP

					•				DQA:	Date:	
NCR: Yes	/ No				WORK ORDER NON-C	CONFOR	MANCE / UP	DATE	QA Closed:	Date:	
Work Order:					DISPOSITION			AGAINST DE	PARTMENT	/PROCESS	
Part No.					Rework Scrap Use-as-is Work Order Update	1 1	Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	1	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root				Descri	ption of work order update	Initial	Ac	tion	Sign &		
Cause	Date	Step	Qty	,	or Non-conformance	Chief Eng	Desc	ription	Date	Verification	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier											

Landing (	Gear	General		_		_		
Г	Bending	Bend	Г	Grain		Ovalized	L	Pressure/Forced
	Centre Not Concentric to O/S	BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete		Part Incorrect	L	Weld
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled
	Cuffs	Contamination		Maintenance	L	Part Moved		
	Heat Treat	Countersink		Mislabeled		Positioned Wrong	_	_
	Inspection Strip in Tube	Cut Too Short		Misread		Power Loss/Surge		Other
	Ripples in Bend	Drill Holes		Offset				
	Torque Waves in Extrusion	Drawing	,	Out of Calibration				
	Turning Sequence	Finish	Г	Out of Sequence				

Outside Dimensions

**FAULT CATEGORY** 

Wave/Twist in Tube

Folio

Training Unapproved

## Work Order ID 100189

April-18-13 2:54:14 PM

\*100189\* Page 2

Item ID: Revision ID: Item Name:	D4062-1 Upper Tank	Support		Accept	*N90004	<b>010</b> 0	<b>)</b> *	Setup Star Stop	IVI	S1*
Start Date: Required Date Reference:	4/18/13 : 5/02/13	Start Qty: 5.00 Req'd Qty: 5.00	*5* *5*		Cust Item ID: Customer:				° ^INI	S2*
Approvals:	Process P	lan:	Date:	Tooling: SPC (Y/N):	Date:		R	Run Star Stop	, "N	R1* R2*
Sequence ID/ Work Center II	D	Operation Description QC2-Inspect parts off ma	achine FAI/FAIB	Set Up/ Run Hours 0.00		# Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
*106* QC Quality Control		Memo		0.00	OFC  4a 2013-0	)4-26	<u>.</u>			
*130		QC8- Inspect parts - second	nd check	0.00	m/13/04/28		,			1
QC Quality Control	·	Memo		0.00	;		<b>(e</b> _	<i>-</i>		
140 *140*		Identify as per dwg & Sto	ck Location:	0.00			6	E		U
Packaging Packaging		Memo		0.00	,					13.06.12

										DQA:	Date:	
NCR: Y	es / N	0			WORK ORDER NON-	·CO	NFORI	MANCE / UPI	DATE	QA Closed:	Date:	
Work Orde	r:				DISPOSITION				AGAINST DE	PARTMENT	/PROCESS	
Part N NCR N		•			Rework Scrap Use-as-is Work Order Update			Skid-tube  Machining  noforming  Large Fab	Crosstube Small Fab Finishing Composite	4	Water Jet d. Eng. Coor. re/Packaging Supplier	Engineering Quality Other
Root					Description of work order update		Initial	Act	ion	Sign &		
Cause	Dat	e	Step	Qty	or Non-conformance	Cł	nief Eng	Descr	ription	Date	Verification	QC Inspector
Doc/Data		$\neg$										
quip/Tooling					i ·			i				
Operator												
Material [					]							
Setup												

			FAU	LT CATEGORY				
Landin	g Gear	General		_		_		
Γ	Bending	Bend		Grain		Ovalized	L	Pressure/Forced
Γ	Centre Not Concentric to O/S	BOM/Route		Hardware		Over/Under tolerance		Temperature/Cure
	Cracks	Broken/Damaged		Inspection Incomplete		Part Incorrect	L	Weld
	Crushed/Crimped	Burrs		Instructions Incomplete/Unclear		Part Lost/Missing		Wrong Stock Pulled
	Cuffs	Contamination		Maintenance		Part Moved		
	Heat Treat	Countersink		Mislabeled		Positioned Wrong		
[	Inspection Strip in Tube	Cut Too Short		Misread	L	Power Loss/Surge		Other
Γ	Ripples in Bend	Drill Holes		Offset				<u> </u>
	Torque Waves in Extrusion	Drawing		Out of Calibration				
Γ	Turning Sequence	Finish		Out of Sequence				
Ī	Wave/Twist in Tube	Folio		Outside Dimensions				

Other Process Supplier Training Unapproved

Work Ord		00189		*100	189*		. ,	۶	Page 3
Item ID: Revision ID: Item Name:	D4062-1 Upper Tank	Support		Accept	*N9000	14010	<b>)*</b> s	Setup Start Stop	*NS1* *NS2*
Start Date: Required Date Reference:	4/18/13 : 5/02/13	Start Qty: 5.00 Req'd Qty: 5.00	*5* *5*		Cust Item ID: Customer:	:			IV.57
Approvals:	Process P	lan:	Date:		Date	• • • • • • • • • • • • • • • • • • • •	R	Run Start Stop	*NR1* *NR2*
Sequence ID/ Work Center I 150 *150* QC Quality Control	D .	Operation Description QC21- Final Inspection -	Work Order Release	Set Up/ Run Hours 0.00	Tool ID	Tool# Plan Code	Accept Qty		Reject Insp. Number Stamp

MF 13-6-19

											DQA:	Da1	:e:	
NCR: Y	⁄es	/ No				WORK ORDER NON-C	10:	NFORM	MANCE / UP	DATE	QA Closed:	Dat	te:	
Work Orde	<u> </u>		<del></del>	<del> </del>		DISPOSITION				AGAINST DI	•			
Part N	- - No.					Rework Scrap Use-as-is Work Order Update		Therm	Skid-tube Machining noforming Large Fab	Crosstube Small Fab Finishing Composite	-4	Water Jet d. Eng. Coor re/Packaging Supplier		Engineering Quality Other
Root					Descri	ption of work order update	ı	nitial	Act	tion	Sign &			
Cause		Date	Step	Qty	(	or Non-conformance	Ch	ief Eng	Desci	ription	Date	Verification	1	QC Inspector
Doc/Data Equip/Tooling Operator Material Setup Other Process Supplier Training Unapproved		•			,									
						<del></del>	AUL	T CATE	GORY					
Landi		Bending Centre No Cracks Crushed/ Cuffs Heat Trea	Crimped t		o/s	General Bend BOM/Route Broken/Damaged Burrs Contamination Countersink Cut Too Short		4	on Incomplete ions Incomplete/I nance led	Unclear	Ovalized Over/Under Part Incorre Part Lost/M Part Moved Positioned V	ct issing Wrong		Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled Other
		Ripples in	Bend			Drill Holes	1	Offset			·			

Out of Calibration

Out of Sequence

Outside Dimensions

Turning Sequence

Wave/Twist in Tube

Torque Waves in Extrusion

Drawing

Finish

Folio

## **Picklist Print**

April-18-13 2:54:17 PM

Work Order ID: 100189

\*100189\*

Parent Item:

D4062-1

\*D4062-1\*

Parent Item Name: Upper Tank Support

**Start Date:** 4/18/13

Required Date: 5/02/13

Start Qty: 5.00

Required Qty: 5.00

**Comments:** 

IPP REV:A NEW ISSUE 10-06-22 JLM VERIFIED BY:DD

REV:B AS PER REV B 11-11-23 JLM VERIFIED BY:DD

IPP IPP REV:C

AS PER REV C 12-03-08 JLM VERIFIED BY:DD

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MUHMWB10		Purchased	No				sf	1,230.555		18			-
*MUHMWF UHMW 1" Black	310*							1,200.000	**	10 Zo		<del></del>	JMB-4-23

<b>Location</b>	Loc Oty	Loc Code	
MAT019	1230.554989		
121278	12.0949895		
122575	47.6		
123229	53		<u></u>
123704	63.8		
123949	6.96		
124382	269.5		
124758	377.6		134758
125137	400		

									DQA	: Date:	
NCR: Ye	es / No				WORK ORDER NON-	CON	FORM	MANCE / UPDATE	QA Closed	: Date:	Č.
Work Order	:				DISPOSITION			AGAINST	DEPARTMENT	/PROCESS	
Part No	D				Rework Scrap Use-as-is Work Order Update		f Therm	Skid-tube Crosstube Machining Small Fab noforming Finishing Large Fab Composite	Rec/Sto	Water Jet od. Eng. Coor. ore/Packaging Supplier	Engineering Quality Other
Root				Descr	iption of work order update	In	nitial	Action	Sign &		
Cause	Date	Step	Qty		or Non-conformance	Chi	ef Eng	Description	Date	Verification	QC Inspector
quip/Tooling Operator Material Setup Other Process Supplier											
Inapproved					_	<u> </u>				<u> </u>	
			· ·	· ·	General	AULI	CATE	GUKY			
Landing	Bending Centre No Cracks Crushed/	•	ntric to	o/s	Bend BOM/Route Broken/Damaged Burrs		•	ire ion Incomplete ions Incomplete/Unclear	Ovalized Over/Unde Part Incorre	ect	Pressure/Forced Temperature/Cure Weld Wrong Stock Pulled
-	Cuffs Heat Trea		Tube	-	Contamination Countersink Cut Too Short		Mainte Mislabe Misread	eled	Part Moved Positioned Power Loss	Wrong	Other
	Ripples in	•		<b> </b>	Drill Holes	$\vdash$	Offset			· · ·	<b>L</b>
F	Torque V		Extrusio	n	Drawing	<u> </u>		Calibration			
·	Turning S				Finish	$\square$	Out of S	Sequence			

Outside Dimensions

Wave/Twist in Tube

Folio

H:/FORMS/Quality Assurance\approved QA/NCRWO Rev G

DART AEROSPACE LTD	Work Order:	100 189
Description: Lower Tank Support	Part Number:	D4062-1
Inspection Dwg: D4062 Rev: C		Page 1 of 1

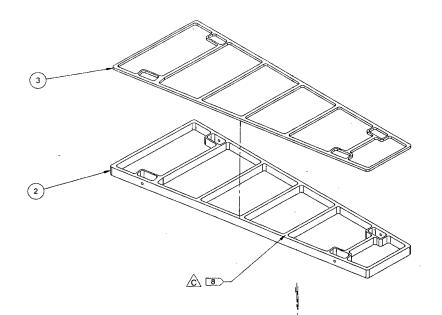
## FIRST ARTICLE INSPECTION CHECKLIST

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
1.00	+/-0.030	1.015	/		Caliper	Jfc-01
0.13	+/-0.030	0.160	V			11
. 2.00	+/-0.030	1.998		* **	7	<b>L</b>
1.00	+/-0.030	0.999			ü	Ę.
0.35	+/-0.030	0,353		·····	n	٠,
R0.25	+/-0.030	R0.250	$\checkmark$		V)	11
0.38	+/-0.030	0.377	✓			` '
. 0.38	+/-0.030	0.375	V .		4	٧ `
1.38	+/-0.030	1.370	<b>V</b> ,		. ~	٠, -,
R0.25	+/-0.030	RO.250	<b>V</b> ,		٠,	٠,
31.38	+/-0.030	31.364			h	• •
28.30	+/-0.030	J8-243	<b>V</b>		eu	1 (
× 26.30	+/-0.030	26.295			17°m	l <sub>i</sub>
20.83	+/-0.030	20.817			4	4.
15.51	+/-0.030	15499			ч	ч
10.19	+/-0.030	10.183	$\checkmark$		ų ,	<b>N</b> (
5.07	+/-0.030	5.066	$\checkmark$		- 4	٠,
3.07	+/-0.030	3.073			и	L <sub>I</sub>
. • .						

Measured by: Stc 13. A	Audited by:	and	Preliminary Approval:	
Date: 2013-04-26	Date:	13/04/28	Date:	-

Rev	Date	Change	Revised by	Approved
A	12.02.01	New Issue	KJ	
B '	12.05.15	Dimensions updated per Dwg Rev C	KJ , o	10
C	12.06.08	Part description corrected	KJ ek	1/1

Coff Math	OTY -041	PARTHUM	BER DESCRIPTION
1	· x	D4062-041	TANK SUPPORT ASSEMBLY
. 2	- · 1	Э4062-1	LOWER TANK SUPPORT
3	1	D4062-3	UPPER TANK SUPPORT



COPY Text 100 100189 MC3

## **D4062-041 TANK SUPPORT ASSEMBLY**

NOTES: 1) MATERIAL: N/A 2) FINISH: N/A

2) FINISH: N/A
3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 2.91 lbs
8) BOND ITEMS 2 & 3 TOGETHER USING PROSEAL 890 OR MIL-S-8802 CLASS B2 SEALANT &

REMOVE HARDWARE TO ATTACH ITEMS 2 & 3. REMOVE C'BORE. DC 11.12.14 В MODIFIED DIMS & DESIGN OF -1, ADDED -3/-041 DC 11.09.29 Α HS 10.07.26 REV. DESCRIPTION BY DATE DESIGN DART AEROSPACE LTD DRAWN HAWKESBURY, ONTARIO, CANADA DRAWING NO. CHECKED REV. C D4062 MFG. APPR. SHEET 1 OF 3

APPROVED TITLE TANK SUPPORT

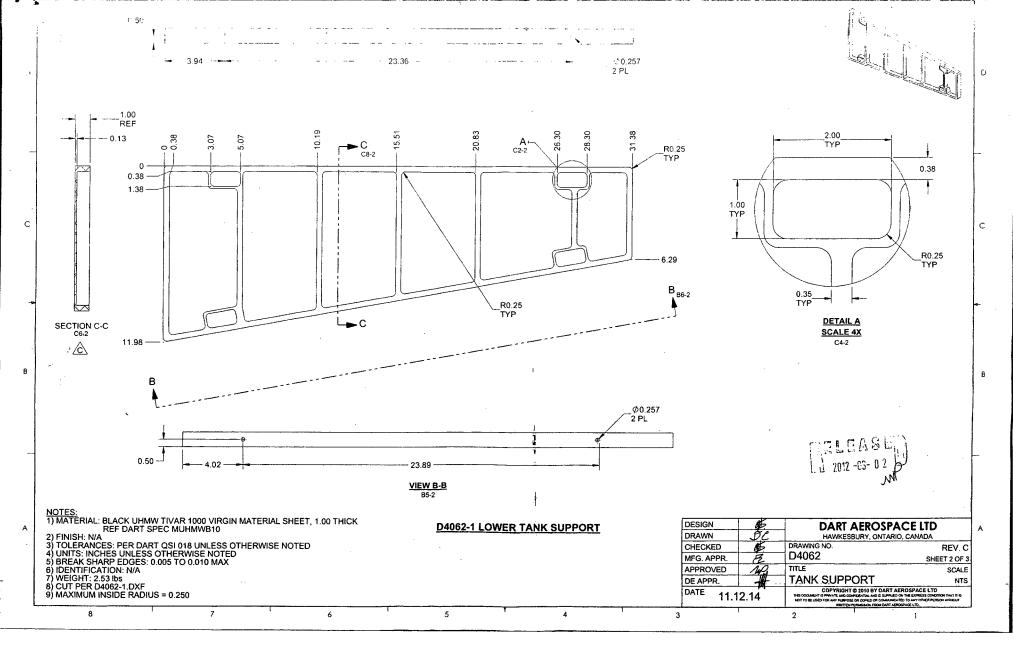
COPYRIGHT® 2919 BY DART AEROSPACE LTD

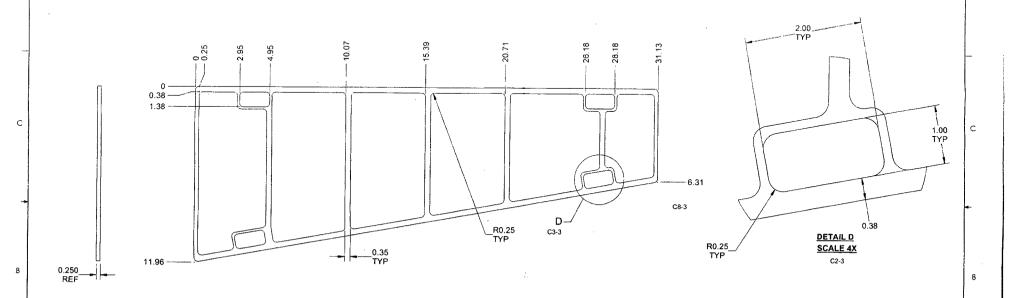
HIS GOOGOOD IS SHOWN AN COMPRISH, NO BY SUPPLIED IN THE DRIVES CONTINUE HIS LITTLE TO THE DRIVEN AND HOSPICE AND CONTINUE HIS LITTLE TO THE CHIEF AN APPROXIMENT HIS LOWER CONTINUE HIS LITTLE TO THE CHIEF AND HIS HIS HIS HIS LITTLE TO THE CHIEF AND HIS HIS HIS LITTLE TO THE CHIEF AND H DE APPR. DATE 11.12.14

SCALE

NTS

В





**D4062-3 UPPER TANK SUPPORT** 

NOTES:
1) MATERIAL: BLACK UHMW TIVAR 1000 VIRGIN MATERIAL SHEET, 0.25 THICK
REF DART SPEC MUHMWB025

2) FINISH: N/A
3) TOLERANCES: PER DART SPEC MUHMWB025
4) UNITS: INCHES UNLESS OTHERWISE NOTED
5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
6) IDENTIFICATION: N/A
7) WEIGHT: 0.37 lbs
8) CUT PER D4062-3.DXF

DESIGN	<b>A</b> 5-	DART AEROSPACE LTD		
DRAWN	DC	HAWKESBURY, ONTARIO		
CHECKED	85	DRAWING NO.	REV. C	
MFG. APPR.	昱	□ D4062	SHEET 3 OF 3	
APPROVED	149	TITLE	SCALE	
DE APPR.	-#	TANK SUPPORT	NTS	
DATE 11 12 14		COPYRIGHT © 2010 BY DART AEROSPACE LTD		

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